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Chinese Military Innovation in Artificial Intelligence

Hearing of the U.S.-China Economic and Security Review Commission

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Introduction

Xi Jinping has called upon the Chinese People's Liberation Army (PLA) to become a world-class military (世界一流军队) by mid-century.[1] Chinese military modernization has been directed towards learning from and targeting the U.S. military, which is seen as a powerful adversary (强敌). Since the 1990s, the PLA has concentrated on developing asymmetric capabilities aimed at exploiting potential American vulnerabilities and undermining current American advantages. The PLA aspires not only to equal but also to surpass the U.S. military by seizing the initiative in the course of the ongoing Revolution in Military Affairs (RMA) that is being catalyzed by today's advances in emerging technologies.[2] Chinese military strategists anticipate a transformation in the form and character of conflict, which is seen as evolving from today's "informatized" (信息化) warfare to future "intelligentized" (智能化) warfare.[3] The PLA may even offset U.S. military power if successful in advancing innovation and leapfrogging ahead in the course of this transformation. The advent of AI on the future battlefield might disrupt the balance of power in ways that risk jeopardizing strategic stability and undermining deterrence in the U.S.-China relationship. At the same time, the PLA continues to confront critical challenges to operationalizing artificial intelligence (AI) across a range of applications, from issues of talent to the management of data and adaptation as an organization. Looking forward, as this rivalry intensifies, the United States must recognize the imperative of investing in our own innovation and sustaining our core competitive advantages.

The PLA is actively exploring and experimenting with new concepts and capabilities to leverage artificial intelligence to enhance its combat power and deterrence. Chinese defense academics and military strategists are creating ideas and theories of 'intelligentized operations,' seeking to determine new mechanisms for victory.[4] The use of AI in war-gaming and operations research could contribute to conceptual advancements, including the exploration of new notions of human-machine coordination and confrontation.[5] In the process, the PLA is closely studying and adapting lessons learned from U.S. concepts and initiatives, but there is often a significant asymmetry of information, insofar as the state of AI

research and applications in China often receive less attention from American strategists. The primary purpose of this testimony—and the author's research over the past couple of years, which is based entirely on open sources that are readily available—has been to contribute to improved understanding of the implications of these military and technological advancements in the People's Republic of China, in ways that can inform future directions in American competitive strategy.[6]

Endnotes

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